

**The analysis of Factors affecting choice of college:
A case study of UNLV hotel College students**

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ABSTRACT

The growth in the tourism and hospitality industry caused a tremendous increase in the number and type of tourism and hospitality programs at two and four year colleges in the United States. This study identified factors that influence students' choices among in-state, out-of-state, and international students. The study utilized exploratory factor analysis to identify appropriate factors and multivariate analysis of variance to determine differences in college choices among the three groups. The results of this research will be beneficial to colleges in the development of appropriate promotions to differentiate themselves in a meaningful way to potential students, not just in the United States but also over the world.

Keywords: *college choices, hotel college, higher education*

INTRODUCTION

The college enrollment decision has become increasingly complex during the last 30 years, as higher education has transformed in many ways. American higher education has grown from a collection of small, local markets to regional and national markets (Hoxby, 1997). The higher education environments have become competitive and institutions increasingly have to compete for students in the recruitment markets (James et al., 1999).

The tourism and hospitality industry has experienced dramatic growth both in size and complexity during the latter half of the twentieth century (World Tourism Organization, n.d.). This growth in turn fueled a tremendous increase in the number and types of tourism and hospitality programs at two and four year colleges in the United States (Goodman & Sprague, 1991; Jafari, 1997; Riegel & Dallas, 1999). Institutions are now bringing students from all over the world. In 2007, for example, about 2500 students were enrolled in selecting the Harrah College of Hotel Administration (Hotel College) at the University of Nevada, Las Vegas (UNLV), consisting of 34 % in-state and 66% out-of state students including international students (Theriault, 2007). International students, coming from 35 different countries, account for 29 % of the students in the college of hotel administration.

The purpose of study was to identify factors that influence students' choices and to understand the differences in college choices among in-state students, out-of-state students, and international students. For this purpose, the current research employed a case study to understand college students' choices, by selecting the Hotel College at the UNLV.

LITERATURE REVIEW

College Choice

Many studies on college student decision-making use economic and sociologic theoretical frameworks to examine factors of college choice (Hearn, 1984; Jackson, 1978; Tierney, 1983; Somers, Haines, & Keene; 2006). These frameworks have been used to develop three theoretical, conceptual approaches to modeling college choice: (a) economic models, (b) status-attainment models, and (c) combined models.

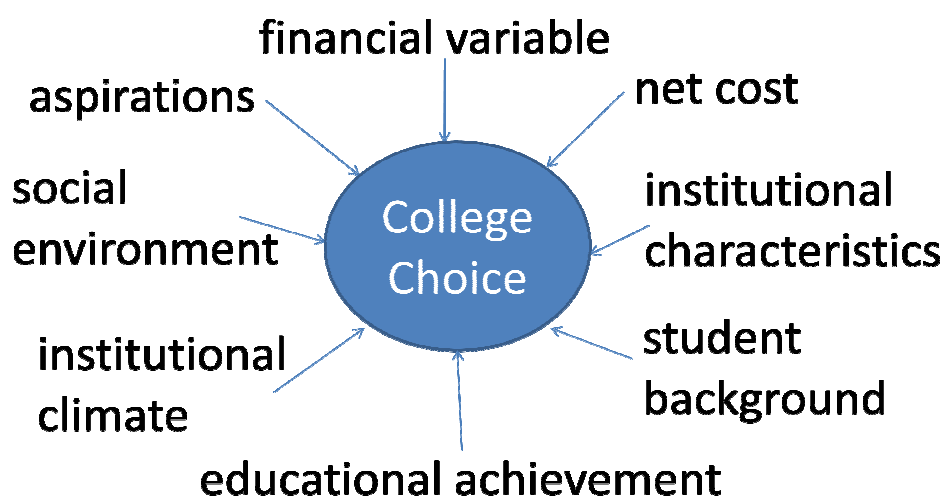
First, the economic models focus on the econometric assumptions that prospective college students think rationally and make careful cost-benefit analyses when choosing a college (Hossler, Schmit, & Vesper, 1999). Second, the status-attainment models assume a utilitarian decision-making process that students go through in choosing a college, specifying a variety of social and individual factors leading to occupational and educational aspirations (Jackson, 1982). Third, the combined models incorporate the rational assumptions in the economic models and components of the status attainment models. Most combined models divide the student decision-making process into three phases: aspirations development and alternative evaluation; options consideration; and evaluation of the remaining options and final decision (Jackson, 1982).

Another research approach to choice and decision-making in higher education considers three different levels of students' choice: global, national, and curriculum level. First, the global level focuses on why students choose to study abroad. Student migration and study abroad has become a huge business matched by tremendous investment, especially among western countries. Zimmerman et al. (2000) has identified "push and pull" factors

which operate along the students' decision-making process in the global market. Dreher and Poutvaara (2005) have suggested that economic and cultural forces play an important role in shaping the international students migration markets. Second, the national level discusses the choice of higher education institution within countries. In Australia, for example, James et al. (1999) found that field of study preferences, course and institutional reputations, course entry scores, easy access to home and institutional characteristics significantly influenced applicants' choice of institution. In addition, the teaching reputation of universities has been more important for college students in England than their research profiles (Price, et al., 2003). Foskett et al. (2006) found that students consider more carefully economic factors in times of distress and financial difficulty. These factors include job opportunities to supplement their incomes, accommodation costs and family home proximity. Third, course of study decisions tend to be closely related to institutional choice decisions. James et al. (1999) has identified a range of factors influencing course preference including: the reputation of the course among employers; graduate satisfaction from the course; graduate employment rates from the course; the quality of teaching in the course; approaches to teaching, learning and assessment from the course including opportunities for flexible study.

Two different perspectives to understanding the complex college selection decision have emerged. One approach focuses on how aspiring students develop a college choice set, decide where to apply considering admission criteria, and make their enrollment decisions (Hearn, 1984). Geography also imposes constraints on college choices. That most students attend public, in-state institutions implies that college options are circumscribed by state of residence (Niu & Tienda, 2008). The second approach emphasizes institutional characteristics such as cost, size, distance, the quality of programs, and availability of financial aid. The factors most commonly associated with a comprehensive college choice model include student background characteristics (Jackson, 1982), aspirations (Chapman, 1984; Jackson, 1982), educational achievement (Hanson & Litten, 1982; Jackson, 1982), social environment (Hossler & Gallagher, 1987), financial variables (St. John, 1990; 1991), net cost (St. John & Starkey, 1995), institutional climate (Chapman, 1984), and institutional characteristics (Hanson & Litten, 1982; Hossler et al., 1989). The present study selected a conceptual framework for college choice that Somers, Haines, & Keene (2006) constructed for 2-year college choice with eight factors (Figure 1).

Figure 1. College choice factors



The significant factors used to choose colleges among in-state, out-of-state and international students might not be the same. Tuition and financial aid are different for each of these groups. In some states there are more scholarships available for in-state applicants to encourage attracting more high-achieving students. Job opportunities during and after graduation are not the same. Also, the reputation or recognition of a college might be different internationally than domestically. This could affect job opportunities for students in their own countries. Therefore, it is assumed that the significance of the various factors is not the same among these three groups of students.

The 2009 Lipman Hearne paper sampled both public and private college students. The study investigated the importance of total costs versus location, program reputation and overall reputation. The study found economic downturns do affect some students' choice of institution. They found solid performer students are more likely to enroll at a public institution in an economic downturn. The study differentiated between "academic superstars" and "solid performers" based upon SAT scores.

A Lipman Hearne report (2009) claimed parents are deeply involved and influential to their high-achieving children's college choices. The report also found open houses, dialogue with college friends, alumni, and admitted-student programs are extremely influential to students. The report claimed these sources are not well known, but very powerful to student's decision making for their college. The study also found 26% of sampled students paid a specialist or advisor during the college decision process.

METHODOLOGY

Instrument

This study utilized a web-based survey design, a self-administered questionnaire to examine motivating factors for students choosing Hotel College at UNLV. The list of attributes was developed through an extensive literature review, and pretest feedback from students and faculty in the hotel college. This study used a constructed model of college choice that uses factors in the combined models to understand the college decision. The questionnaire included factors of college choice. 64 dimensions of factors were utilized by measuring hotel college factors' attributes on a 5-point scale with from 1 (not important) to 5 (very important). Also, influence factors were developed with a little modification to reflect influence factor scaling with 1= no influence and 5= very strong influence. One section contained demographic questions regarding respondents' gender, residency status, country, age, major, and race.

Data Collection

As for Spring 2010, about 2,600 students enrolled in the Hotel College undergraduate program. This study used for the entire hotel student population at UNLV to investigate college choice attributes of the hotel college. An online survey, Qualtrics was employed to collect data. A list of currently enrolled undergraduate students in the Hotel College was obtained from a hotel college administrator. Data was collected from April 1 – 30, 2010.

Data Analysis

Data analyses involving several procedures conducted, using SPSS 18. Data was analyzed, using factor analysis, reliability, and MANOVA. An exploratory factor analysis was conducted to identify the number of dimensions on importance, financial, and influence items with a loading cutoff value of 0.40 for item inclusion and oblique rotation with both eigenvalue criterion and Scree Test. The reliabilities of the dimensions were assessed by Cronbach's Alpha. MANOVA was conducted to identify the different current residency status that differentiates a set of dependent variables.

RESULTS

296 students participated in the survey during the period of online survey. 268 of the 296 were useful to run data analysis. Respondents consist of 59 in-state, 84 out-of-state, and 125 international students.

Factors of College Choice

A preliminary extraction was conducted using maximum likelihood (ML) and principal axis factoring (PAF). The ML approach estimates factor loadings that are most likely to have produced the observed correlation matrix, whereas the PAF estimates communalities in an attempt to eliminate error variance from factors and maximize variance extracted by factors. Two factoring procedures were utilized to determine whether the solutions are stable across the two procedures. Both orthogonal and oblique rotations were used to determine if there were sizable correlations between extracted factors. Comparisons among the orthogonal and oblique solutions on the scales of college choice indicated that the 11 factors were correlated, with the sizes of all 11 coefficients approximating .41 ($\Delta = 0$). In addition, the oblique rotation yielded more interpretable factors than the orthogonal rotation. Factor solutions from the ML and PAF procedures were very similar. This study reports the 11-factor ML solution with oblique rotation because the ML represented extracted 11 factors with corresponding items closer to the factor structure postulated by the authors than the PAF solution.

The results of the exploratory factor analysis are reported below (Table 1). The maximum likelihood solution with oblique rotation of 64 attributes produced 11 factors based on eigenvalue criteria, in addition to the Scree plot. The final results of the common factor analysis of the remaining 55 items passed both Bartlett's test of sphericity ($p < 0.0005$) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.884), indicating that using factor analysis on 55 attributes was highly appropriate. This analysis explained 66.32 % of the variance.

The factors were labeled as "School characteristic", "Influencer", "Financial support", "Degree benefit", "Environment", "Facilities", "Family support", "Aspirations", "Cost", "Career preparation", and "Media". The reliabilities for each factor were measured by Cronbach's Alpha (Table 1). The reliabilities for most factors were higher than .80. The reliability for cost was relatively lower, .64; however, it is considered acceptable internal consistency (Hair et al, 2006).

Differences in Factors among Groups

A multiple analysis of variance (MANOVA) was applied to compare different groups in 11 factors of college choice (dependent variables). Independent variable included students

- in-state, out-of-state, and international students. Dependent variables included the college choice dimensions: “School characteristic”, “Influencer”, “Financial support”, “Degree benefit”, “Environment”, “Facilities”, “Family support”, “Aspirations”, “Cost”, “Career preparation”, and “Media”, which were extracted from exploratory factor analysis. Table 3 shows the results of the MANOVA analysis.

Data was screened for outliers; no case was found. Assumption of normality was met, but was considered to be robust to violation, as dictated by the central limit theorem. Box’s M test for equality of covariance showed significant differences in error variances across them ($p < .0005$), thus Pillai’s Trace test statistic value was used. There was a statistically significant difference among three different types of residency status on the combined dependant variables, $F(22, 512) = 5.144, p < .005$ (using Pillai’s Trace criterion) with a strong association among different groups and each dependent variable (Table 2).

Bonferroni post hoc test with a conservative alpha level ($0.0045 = .05 / 11$) was used. In regard to “School characteristics”, statistically significant differences were found between in-state and out-of-state and between in-state and international students, $p = .002$ and $p = .003$, respectively. However there was no significant difference between in-state and international student. In “Facilities”, there was a statistically significant difference among three different types of residency status, all $ps < .0005$, with the highest score found in the out-of-state group (3.11, 1.29), followed by in the international group (2.58, 1.26), and in-state students (2.12, .95). In regard to family support, statistically significant differences were found only between in-state (2.29, .94), and out-of-state (3.03, 1.38), $p < .002$. In regard to “Cost”, statistically significant differences were found between in-state (2.10, 1.07) and out-of-state (2.77, 1.38) and between out-of-state and international students (2.15, 1.19), $p < .002$ and $p < .003$, respectively. However there was no significant difference between in-state and international students, $p > .05$. Lastly, in “Media”, there was a statistically significant difference between in-state and international students and between out-of-students, $p < .0005$ and $p < .009$, respectively. However, was no significant difference between in-state and out-of-state students, $p > .05$.

CONCLUSION

The study identified 11 factors of college choice, and the results extended previous research to find more factors such as degree benefit, career preparation and media impact. Furthermore, this research compared the differences in the factors among three different groups: in-state, out-of-state students, and international students. The results reveal the differences in factors of college choice among the three different groups.

The results indicated out-of-state students consider cost, facilities, and family support as significantly important factors when choosing Hotel College compared to the other groups. An interesting result revealed media such as TV programs, soap opera, and news significantly influenced international students. Particularly, over the past decade, UNLV’s Hotel College has become much more recognized in South Korean due to media impact since Korean TV series including “Hotelier” in 2001 and “All-in” in 2003 were set in Las Vegas. The result is consistent with the population of Korean students. This indicates media can play an important role in attracting foreign students as they have limited access to school information. Therefore, college administrations should consider the use of media to promote a school in a positive way.

The current economic downturn and an increasing unemployment rate have led to college enrollment gains ranging from 2 percent to 27 percent in the 100 colleges in the United States, according to a recent survey conducted by the American Association of Community Colleges (Streitfeld, 2009). As the college population becomes more diverse and the higher education system continues to grow, the college choice process will become even more complex, thus requiring closer attention to the specification of plausible choice sets.

The results will be useful for college administrators to consider the management and presentation of its resources to the wide market place of current and future students. Therefore, the research will be beneficial in developing appropriate promotions that college recruiters can use to differentiate their colleges in a meaningful way to potential students worldwide.

REFERENCES

- Chapman, R. (1984). *Toward a theory of college choice: A model of college search and choice behavior*. Alberta, Canada: University of Alberta Press.
- Goodman, R. J., & Sprague, L.G. (1991). The future of hospitality education: Meeting the industry's need. *The Cornell Hotel and Restaurant Administration Quarterly*, 32(2), 66-70.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th Ed.). Upper Saddle River, NJ: Prentice Hall.
- Hanson, K., & Litten, L. (1982). Mapping the road to academia: A review of research on women, men, and the college selection process. N P. Perun (Ed.), *The undergraduate woman, Issues in education*. Lexington, MA: Lexington.
- Hearn, J. (1984). The relative roles of academic ascribed and socioeconomic characteristics in college destinations. *Sociology of Education*, 57, 22-30.
- Hoxby, C.M. (2001). The return to attending a more selective college: 1960 to the present, pp. 13-42. In: Devlin, M., Meyerson, J. (Eds.), *Forum Futures: Exploring the Future of Higher Education*, 2000 Papers, 3.
- Hossler, D., & Gallagher, K. (1987). Studying college choice: A three-phase model and the implication for policy makers. *College and University*, 2, 207-21.
- Jackson, G. (1978). Financial aid and student enrollment. *Journal of Higher Education*, 49, 548-74.
- Jackson, G. (1982). Public efficiency and private choice in higher education. *Educational Evaluation and Policy Analysis*, 4, 237-47.
- Jafari, J. (1997). Tourismification of the profession: Chameleon job names across the industry. *Progress in Tourism and Hospitality Research*, 3, 175-181.
- James, R., Baldwin, G., & McInnis, C. (1999), *Which University? The Factors Influencing Choices of Prospective Undergraduates*, *Evaluation and Investigations Programme*. Higher Education Division, Australia.
- Key, J. C., Yavas, U., & Riecken, G. (1994). Importance - Performance Analysis. *International Journal of Retail & Distribution Management*, 22(5), 35-40.
- Kitcharoen, K.(2004). The importance-performance analysis of service quality administrative departments of private universities in Thailand. *ABAC Journal*, 24 (3). 20-46.
- Martilla, J., & James, J. (1977). Importance-Performance Analysis. *Journal of Marketing*, 41(1), 77-79.
- Niu, S.X., &Tienda, M. (2008). Choosing college: Identifying and modeling choice sets. *Social Science Research*, 37, 416-433.
- Reigel, C. D., & Dallas, M. (1999). Hospitality and tourism: Careers in the world's largest industry. In Council on Hotel Restaurant & Institutional Education (Ed.), *A guide to College Programs in Culinary Arts, Hospitality and Tourism* (6th ed.), (pp. 9-36). New York: John Wiley & Sons.
- Somers, P., Haines, K., & Keene, B. (2006). Toward a theory of choice for community college students. *College Journal of Research and Practice*, 20, 53-67.
- St. John, E. P. (1990). Price response in enrollment decisions: An analysis of the high school and beyond senior cohort. *Research in Higher Education*, 3(2), 161-176.
- St. John, E. P. (1991). The impact of student financial aid: A review of recent research. *Journal of Student Financial Aid*, 21, 18-32.
- St. John, E. P., & Starkey, J. B. (1995). An alternative to net price: Assessing the influence of prices and subsidies on within-year persistence. *Journal of Higher Education*, 66(2), 156-86.

- Streitfeld, R. (2009). Unemployed workers heading back to school. BLUE BELL, Pennsylvania (CNN). Retrieved April 17, 2009 from <http://www.cnn.com/2009/LIVING/02/14/unemployment.education/index.html>.
- Theriault, S. (2007). College of hotel administration student population.[Powerpoints Slides] *College Advisory Board*, November 7, 2007.
- Tierney, M. L. (1983). Student college choice sets: Toward an empirical characterization. *Research in Higher Education*, 18(3), 271–284.
- Water, D., Abrahamson, T. & Lyons, K., (2009). High-achieving seniors and the college decision, *Lipman Hearne Key Insights*. Retrieved September 12, 2010 from <http://www.lipmanhearne.com/home.aspx>
- World Tourism Organization. (n.d.). Facts and figures: Information analysis and know how. Retrieved March 10, 2009, from <http://www.worldtourism.org/facts/menu.html>
- Zemsky, R., & Oedel, P.(1983). *The structure of college choice*. New York: College Entrance Examination Board, Ford Foundation.

Table 1.[illegible]

My parents’/guardians’ advice	-0.702										
Parent’s expectation that you acquire a college degree	-0.634										
My parents’/guardians’ income	-0.624										
Availability of parents/guardians support	-0.553										
Reputation of UNLV Hotel program		0.659									
Your desire to have a college degree		0.606									
My feelings about this institution before I applied for admission		0.546									
Desire to work in the Hospitality Industry		0.527									
The information I received through the mail about this institution		0.456									
The cost of living in the area where the institution is located			0.685								
The tuition cost of this institution			0.647								
The amount of debt in loans I will have when I graduate			0.457								
The prospects of landing a job after graduating										0.787	
Availability of working opportunity through this institution										0.483	
The availability of career counseling										0.435	
Time/credits needed to complete the major											
The number of alumni who obtained jobs in their fields											
Accepted transfer credits											
drama/soap opera											-0.91
News paper, News about hotel school											-0.682
TV advertising											-0.636

Label ^a	School Charact- eristics	Influencer	Financial support	Degree benefit	Enviro- nment	Facilities	Family support	Aspirations	Cost	Career Preparation	Media
Eigen-value	14.09	5.18	3.40	3.04	2.32	1.92	1.58	1.42	1.33	1.17	1.04
Variance explained (%)	25.62	9.41	6.18	5.53	4.22	3.49	2.86	2.57	2.41	2.12	1.90
Cumulative Variance (%)	25.62	35.03	41.21	46.74	50.96	54.45	57.32	59.90	62.31	64.43	66.32
KMO measure	0.884										
Bartlett’s test of Spericity	0.000										
Descriptive Statistics, and Reliability Coefficients											
Mean	16.47	23.83	12.48	10.92	12.56	15.94	10.99	11.55	7.03	12.15	13.91
Variance	44.63	53.25	54.67	33.89	31.07	56.9	27.72	26.78	14.367	38.28	11.43
N	6	6	5	6	5	6	4	5	3	6	3
Cronbach’s Alpha	0.841	0.844	0.869	0.893	0.808	0.872	0.803	0.792	0.635	0.824	0.842

Note. Extraction Method: Maximum Likelihood, Rotation Method: Oblimin with Kaiser Normalization, Rotation converged in 25 iterations. a.Label indicates the suggested factor name.

Table 2.
Mean Scores, Standard Deviations, and statistical significances ^{a,b}

	In-state	Out-of-state	International	F-ratio	Sig.	
	N=59	N=84	N=125	5.14	0.000	*
	Mean (SD)	Mean (SD)	Mean (SD)			
F1	2.28 (.88) ^c	2.92 (1.13) ^d	2.85 (1.14) ^d	7.08	0.001	*
F2	3.63 (1.31)	3.85 (1.23)	4.15(1.11)	4.30	0.014	
F3	2.44 (1.54)	2.44 (1.54)	2.54 (1.49)	0.18	0.833	
F4	1.62 (.70)	2.07 (1.20)	1.74 (.88)	4.58	0.011	
F5	4.02 (1.05)	3.42 (1.16)	3.74 (1.22)	4.84	0.009	
F6	2.12 (.95) ^c	3.11 (1.29) ^d	2.58 (1.26) ^c	11.99	0.000	*
F7	2.29 (.94) ^c	3.03 (1.38) ^d	2.78 (1.36)	5.84	0.003	*
F8	2.39 (1.05)	2.45 (1.16)	2.15 (.90)	2.43	0.090	
F9	2.10 (1.07) ^c	2.77 (1.38) ^d	2.15 (1.19) ^c	7.74	0.001	*
F10	1.80 (.88)	2.12 (1.09)	2.02 (1.12)	1.62	0.201	
F11	4.21 (1.34) ^c	4.42 (1.04) ^c	4.88 /(1.04) ^d	8.84	0.000	*

Note. a Overall MANOVA tests of Pillai's ($p < .0005$); b Box's M (211.828, $p < .0005$) Bonferroni post hoc test was used. The p-value with “*” are significant at the adjusted significance level of 0.01 ($0.05/11=0.0045$); Mean's with different letters (c, d, e) are significantly different at 0.0045 or lower probability level. All variables were measured on a 5 point scale.